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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,552	10/07/2004	Martin Bernardus Johannes Leusenkamp	050348-01585	6903

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Kirk D Houser
Eckert Seamans Cherin & Mellott
600 Grant St
44th Floor
Pittsburgh, PA 15219

EXAMINER

FISHMAN, MARINA

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/510,552

Applicant(s)

LEUSENKAMP ET AL.

Examiner

Marina Fishman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/07/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

General status

1. This is a Final Action on the Merits. Claims 1 and 4 are pending in the case and are being examined.

Drawings

2. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 9 and 10, the Applicant should clarify "an angle of substantially 90°, but less than 90°", according to Figures 3 and 4, the cylindrical end face on an inner side of the ceramic tube forms an angle about 50° that can't be interpreted as

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"substantially 90°" and therefore the limitation "substantially 90°, but less than 90°" is vague.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 4, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Stegmüller [US 4,962,289].

Stegmüller discloses a ceramic tube [5] for use in a vacuum circuit breaker with:

- the ceramic tube [5] being cylindrical in shape with a set length and a set internal diameter, with a cylindrical end face [Figure 3] at each end of the cylinder shape;
- each cylindrical end face being structured to be secured in vacuum tight manner [Figures 1 - 7] to a metal end cap [14a] to form a vacuum chamber, characterized in that the cylindrical end face is shaped in such a manner that, in the assembled state, it makes contact with the metal end cap [14a], at least as far as the internal diameter of the ceramic tube in order to prevent, in operation of the vacuum circuit breaker, a concentration of electrical field at the triple junction of metal end cap [14a], ceramic tube [5] and vacuum chamber;

- wherein the cylindrical end face on an inner side of the ceramic tube forms an angle of substantially 90°.

Regarding Claim 4 Stegmüller discloses a vacuum breaker [Abstract] with the ceramic tube [5].

7. Claims 1 - 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Sinnecker [US 4,445,016].

Sinnecker discloses a ceramic tube [25] for use in a vacuum circuit breaker with:

- the ceramic tube [25] being cylindrical in shape with a set length and a set internal diameter, with a cylindrical end face [Figure 2] at each end of the cylinder shape;
- each cylindrical end face being structured to be secured in vacuum tight manner [Column 2, line 53 +] to a metal end cap [26] to form a vacuum chamber [Abstract], characterized in that the cylindrical end face is shaped in such a manner that, in the assembled state, it makes contact with the metal end cap [26], at least as far as the internal diameter of the ceramic tube in order to prevent, in operation of the vacuum circuit breaker, a concentration of electrical field at the triple junction of metal end cap [26], ceramic tube [25] and the vacuum chamber,
- wherein the cylindrical end face on an inner side of the ceramic tube forms an angle of substantially 90°.

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Regarding Claim 4 Sinnecker discloses a vacuum breaker [Abstract] with the ceramic tube [25].

8. Claims 1 - 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Siemes AG [DE 9205493U].

Siemes AG [DE 9205493U] discloses a ceramic tube [2] for use in a vacuum circuit breaker with:

- the ceramic tube [2] being cylindrical in shape with a set length and a set internal diameter, with a cylindrical end face [Figure 1] at each end of the cylinder shape;
- each cylindrical end face being structured to be secured in vacuum tight manner to a metal end cap [3] to form a vacuum chamber, characterized in that the cylindrical end face is shaped in such a manner that, in the assembled state, it makes contact with the metal end cap [3], at least as far as the internal diameter of the ceramic tube in order to prevent, in operation of the vacuum circuit breaker, a concentration of electrical field at the triple junction of metal end cap [3], ceramic tube [2] and vacuum chamber,
- wherein the cylindrical end face on an inner side of the ceramic tube forms an angle of substantially 90°.

Regarding Claims 4, 6 and 9, Siemes discloses a vacuum breaker with the ceramic tube [2].

Response to Arguments

9. Applicant's arguments filed 04/10/2006 have been fully considered but they are not persuasive.

Applicant has argued, "It is submitted that none of the references, whether taken alone or in combination, teaches or suggests a ceramic tube, wherein at the triple junction of metal end cap, ceramic tube and vacuum chamber, a cylindrical end face on an inner side of such ceramic tube forms an angle of substantially 90 degrees, but less than 90 degrees, with an inner surface of such ceramic tube. Each of the references, taken as a whole, teaches or suggests to one of ordinary skill in the art an angle equal to 90 degrees between a cylindrical end face and an inner surface of a cylindrical ceramic tube. Thus the references clearly do not anticipate Claim 1 under Section 102(b)." The Examiner respectfully disagrees. As pointed out above under 35 USC 112, second paragraph rejection, the limitation "substantially 90°, but less than 90°" is vague. The instant Figures 3 and 4 show the angle to be about 50°, and hence cannot be said to be "substantially 90°". The instant specification, also fail to specify any range of angle that can be used to interpret the limitation "substantially 90°".

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Fishman whose telephone number is 571-272-1991. The examiner can normally be reached on 7-5 M-T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marina Fishman
April 17, 2006


ELVIN ENAD
SUPERVISOR, PATENT EXAMINER
04/19/06